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IS 6195 (1971): Cast open chocks [TED 17: Shipbuilding]



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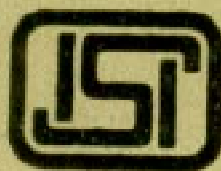
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IS : 6195 - 1971

Indian Standard
SPECIFICATION FOR CAST OPEN CHOCKS

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INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 1

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Indian Standard

SPECIFICATION FOR CAST OPEN CHOCKS

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INDIAN STANDARDS INSTITUTION

MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 1

Indian Standard

SPECIFICATION FOR CAST OPEN CHOCKS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 21 July 1971, after the draft finalized by the Shipbuilding Sectional Committee had been approved by the Marine, Cargo Movement and Packaging Division Council.

0.2 Cast open chocks are used on board ships for mooring of vessel and for such other purposes. The safe working load of chocks in tonnes is based on the admissible breaking load of ropes specified by the competent authority under whose rules the vessel is constructed.

0.3 In the preparation of this standard, considerable assistance has been derived from DIN 81911 'Fairleads' issued by Deutscher Normenausschuss.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard specifies the material and dimensions for cast open chocks.

2. TERMINOLOGY

2.0 For the purpose of this standard the following definition shall apply.

2.1 Nominal Size — The nominal size of the cast open chock is based on the safe working load in tonnes of the appropriate size of rope associated with the chock.

3. MATERIAL

3.1 The open chocks of nominal sizes 1 to 12 shall be made of Grade 15

*Rules for rounding off numerical values (*revised*).

cast iron conforming to IS:210-1962* or cast steel conforming to IS: 1030-1962† or conforming to IS:2985-1964‡.

3.2 The open chocks of nominal size 20 shall be made of cast steel conforming to IS : 1030-1962†.

3.3 The rivet shall be made from rivet bars for shipbuilding purposes conforming to IS : 3298-1965§.

3.4 The bolts shall be made of steel according to IS : 1367-1967||.

4. DIMENSIONS

4.1 The dimensions of the cast open chocks shall be as given in Table 1.

4.2 The dimensions for securing cast open chocks shall be as given in Table 2.

4.3 Where open chocks are made of cast steel the dimensions t_1 , t_2 and t_3 in Table 1 shall be reduced by 3 mm, 2 mm and 2 mm respectively. There shall be no change in other dimensions.

5. TOLERANCES

5.1 The tolerances in millimetres on dimensions of grey cast iron chocks shall conform to IS : 5519-1969¶.

5.2 The tolerances in millimetres on dimensions of cast steel chocks shall conform to IS : 4897-1968**.

5.3 The tolerances on dimensions of machined parts shall be of extra coarse grade specified in IS : 2102-1969††.

6. DESIGNATION

6.1 The open chocks shall be designated by its nominal size, material and the number of this standard.

Example:

Cast open chocks of nominal size 5 of cast steel shall be designated as:

Cast open chocks 5 CS IS : 6195

7. GENERAL REQUIREMENTS

7.1 The cast open chocks shall be reasonably free from casting defects, such as blow holes, inclusions, etc.

*Specification for grey iron castings (*revised*).

†Specification for steel castings for general engineering purposes (*revised*).

‡Specification for steel castings for ship's structure.

§Specification for mild steel rivet bars for shipbuilding.

||Technical supply conditions for threaded fasteners (*first revision*).

¶Deviations for untoleranced dimensions of grey iron castings.

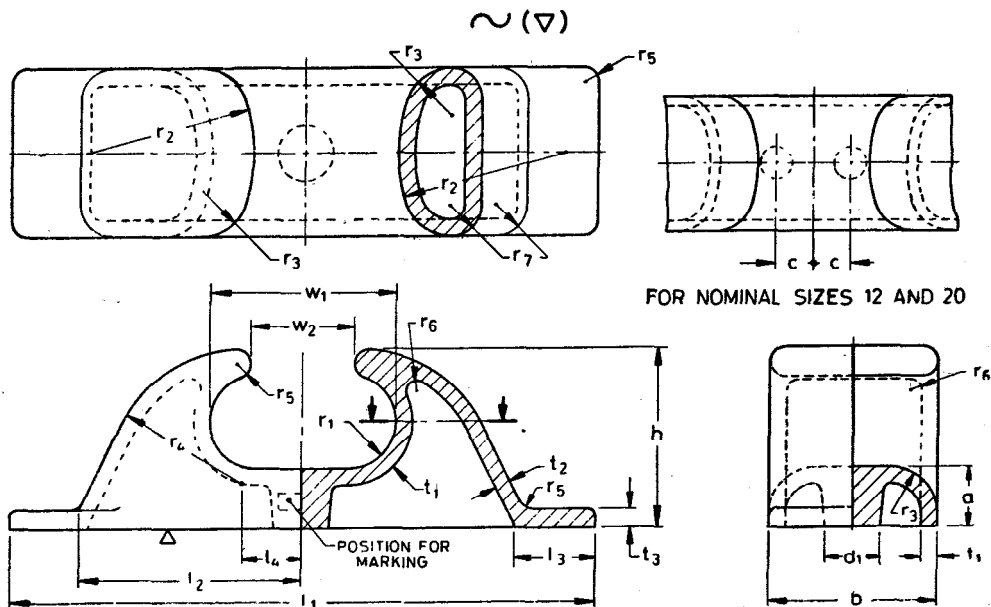
**Deviations for untoleranced dimensions and weight of steel castings.

††Allowable deviations for dimensions without specified tolerances (*first revision*).

TABLE 1 DIMENSIONS FOR CAST OPEN CHOCKS

(Clauses 4.1, 4.3 and 8.1)

All dimensions in millimetres.

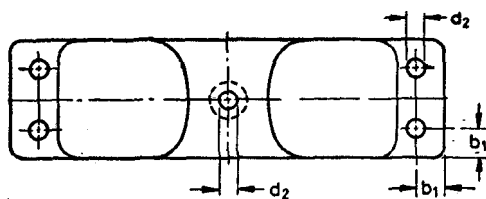


NOMI- NAL SIZE	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i> ₁	<i>h</i>	<i>l</i> ₁	<i>l</i> ₂	<i>l</i> ₃	<i>l</i> ₄	<i>r</i> ₁	<i>r</i> ₂	<i>r</i> ₃	<i>r</i> ₄	<i>r</i> ₅	<i>r</i> ₆	<i>r</i> ₇	<i>l</i> ₁	<i>l</i> ₂	<i>l</i> ₃	<i>w</i> ₁	<i>w</i> ₂
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
1	40	125	—	48	116	410	150	64	40	30	125	30	95	9	9	21	13	12	15	125	70
2	50	150	—	48	153	500	190	68	50	40	150	40	115	13	11	28	16	14	18	160	90
3	63	180	—	60	192	630	240	85	63	50	180	50	145	16	12	34	18	16	20	200	110
5	80	210	—	70	242	770	300	100	80	63	210	60	180	20	14	37	20	18	22	250	140
8	100	250	—	70	304	940	380	105	100	80	250	70	230	25	16	40	22	20	25	320	180
12	120	300	85	70	375	1 130	470	110	125	100	300	85	285	32	18	42	25	22	28	400	235
20	130	360	100	85	395	1 320	550	125	160	100	360	100	340	35	20	45	28	24	32	500	300

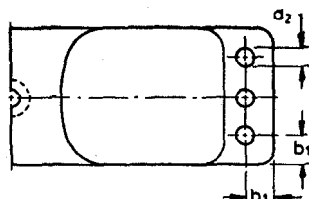
TABLE 2 LOCATION OF SECURING HOLES FOR CAST OPEN CHOCKS

(Clause 4.2)

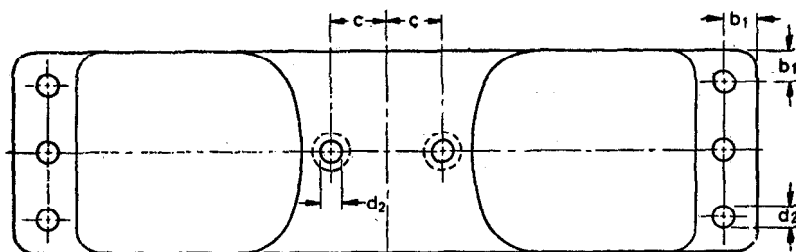
All dimensions in millimetres.



FOR NOMINAL SIZES 1 TO 5



FOR NOMINAL SIZE 8



FOR NOMINAL SIZES 12 AND 20

NOMINAL SIZE	b_1	c	HOLE DIAMETER d_2		NO. OF HOLES	FASTENERS	
			Rivet	Bolt		Rivet	Bolt
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	32	—	17	20	5	16	M18
2	32	—	20	25	5	19	M22
3	40	—	23	30	5	22	M27
5	50	—	26	33	5	25	M30
8	50	—	26	33	7	25	M30
12	50	85	29	36	8	28	M33
20	60	100	32	39	8	31	M36

7.2 The surface finish shall be 6.3 to 25 microns assessed according to IS: 3073-1967*.

8. MARKING

8.1 Cast open chocks shall be marked with their designation in the position shown in the figure in Table 1.

8.1.1 Cast open chocks may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereunder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a well-defined system of inspection, testing and quality control during production. This system, which is devised and supervised by ISI and operated by the producer, has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

*Assessment of surface roughness.

INDIAN STANDARDS

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4374-1967	Mild steel fabricated vertical bollards with and without lugs
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5112-1969	General requirements and testing of ac cargo winches (for ship-board use)
5113-1969	General requirements and testing of ac mooring winches (for ship-board use)
5130-1969	Drums fitted to cargo and mooring winches
5240-1969	Cast skew bollards
5625-1970	Cruciform bollards
5628-1970	Cast deck-end rollers

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